



US Army Corps
of Engineers
Engineer Research and
Development Center

Fact Sheet

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Vector Map (VMAP)

Description and Background: The National Imagery and Mapping Agency's (NIMA) Vector Map (VMAP) product is a collection of data bases that provide vector-based geospatial data at low-, medium-, or high-resolution. These data are separated into nine thematic layers and are topologically structured. This product is designed to support Geographical Information System (GIS) analysis and can be used for various situation /map background displays. Possible Army applications using VMAP exist in the modeling and simulation community.

Key Capabilities: Content: VMAP will be produced at several scales and organized in thematic layers.

a. Scales: VMAP Level 0 will contain the low-resolution feature and attribute content of Operational Navigation Charts (ONCs). It is an updated and improved version of NIMA's Digital Chart of the World (DCW). VMAP Level 1 will contain the feature and attribute content similar to 1:250,000-scale Joint Operations Graphics (JOGs). VMAP Level 2 will have the feature and attribute content similar to 1:50,000 and/or 1:100,000-scale Topographic Line Maps (TLMs). Urban Vector Smart Map (UVMAP) will contain the high-resolution feature and attribute content of City Graphics.

b. Thematic Layers: VMAP is organized into nine thematic layers: boundaries, elevation, hydrography, industry, physiography, population, transportation, utilities and vegetation. A data quality index also is provided. Each thematic layer is stored as a single coverage and contains a set of files that describe the features in each thematic layer.

Structure and Format: Attribution conforms to the Feature Attribute Coding Catalog (FACC). VMAP is Vector Product Format (VPF- and National Imagery Transmission Format Standard (NITFS)-compliant.

Coordinate Reference System: Geographic coordinates are stored in decimal degrees with southern and western hemispheres using a negative latitude and longitude. The GEOREF coordinate system is used for the geographic location of tiles.

Datums: The horizontal datum is World Geodetic System 1984 (WGS 1984). The vertical datum is Mean Sea Level.

Media: VMAP is distributed on CD-ROM, implementing the ISO 9660 volume and file standard.

Standard File Size: The file size varies with feature content.

Accuracy: Initial releases of VMAP will be cartographically derived. Future plans call for the capability to produce VMAP from image source.

Current Status: Worldwide coverage is planned for VMAP Levels 0 and 1. VMAP Level 2 and UVMAP will be produced as dictated by requirements. VMAP production is planned as follows:

VMAP Level 0 - Available with world-wide coverage on a four CD-ROM set.

VMAP Level 1 – 156 CDs are available worldwide. Completion of worldwide production is expected by 2005.

VMAP Level 2- Six CDs are available: Camp Pendleton, North-Central Balkan Peninsula (Former Republic of Yugoslavia, Former Yugoslavian Republic of Macedonia, Mozambique and Texas). Subsequent production will follow based on CINC or service requirements.

UVMAP - CD of Havana, Cuba, is presently available.

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July 2001